

CLAIMS:

1. A method for providing operational protocols to medical diagnostic systems, the method comprising the steps of:
5 storing a protocol on a machine readable medium;
displaying user viewable indicia descriptive of the protocol at a medical diagnostic location;
selecting the protocol via a user interface; and
loading the protocol at the medical diagnostic location from the machine
10 readable medium.

2. The method of claim 1, wherein the user viewable indicia include a textual description of the protocol.

3. The method of claim 1, wherein the user viewable indicia include an exemplary image obtainable via the protocol.

4. The method of claim 1, comprising the further step of verifying a subscription status for the diagnostic location prior to loading the protocol.

5. The method of claim 4, comprising the further step of transmitting an authorization prompt to the medical diagnostic location based upon the verification of the subscription status.

6. The method of claim 4, comprising the further step of storing record data indicative of the selection and loading of the protocol.

7. The method of claim 6, wherein the record data includes financial record data for invoicing the medical diagnostic location for the protocol.

8. The method of claim 6, wherein the record data includes data representative of a time expiring subscription.

9. The method of claim 1, wherein the step of selecting the protocol includes selecting a graphical interface device of an on-screen menu.

10. The method of claim 1, comprising the further step of transferring at least one configuration parameter based upon the protocol to a scanner controller for execution of the protocol.

11. The method of claim 1, wherein the machine readable medium includes a memory device remote from the medical diagnostic location.

12. The method of claim 1, comprising the further step of accessing product configuration data representative of a hardware or software configuration of a medical diagnostic system, and displaying the indicia based upon the configuration data.

13. The method of claim 1, wherein the indicia are sortable by image parameters.

14. The method of claim 1, wherein the protocol includes data for filming, viewing, reconstructing or processing images reconstructed from image data.

15. A method for providing operational protocols to a plurality of medical diagnostic systems, the method comprising the steps of:

storing in a distribution system a plurality of operational protocols, the protocols including a first protocol and a second protocol;

establishing network links between the distribution system and first and second diagnostic system;

transmitting data descriptive of the first protocol to the first diagnostic system and data descriptive of the second protocol to the second diagnostic system;
5 and

displaying indicia at the first and second diagnostic systems descriptive of the respective protocols.

16. The method of claim 15, wherein the first protocol is adapted to a first modality diagnostic system and the second protocol is adapted to a second modality diagnostic system, and wherein the first diagnostic system is a first modality system and the second system is a second modality system.
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17. The method of claim 16, wherein the first modality is a magnetic resonance imaging modality.
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18. The method of claim 16, wherein the first modality is a computed tomography imaging modality.

19. The method of claim 16, wherein the first modality is an x-ray imaging modality.
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20. The method of claim 15, comprising the further step of transmitting the first protocol to the first diagnostic system.
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21. The method of claim 20, wherein the protocol is transmitted to the first diagnostic system in response to a request from the first diagnostic system.

22. The method of claim 15, wherein the step of displaying includes displaying a textual description of the protocol.
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23. A method for providing an operational protocol for a medical diagnostic system, the method comprising the steps of:

storing the protocol on a machine readable medium;

5 displaying indicia descriptive of the protocol in a protocol menu of a user interface;

selecting the protocol from the menu; and

transmitting data defining at least one operational parameter from the machine readable medium to a system controller for execution of the protocol.

10 24. The method of claim 23, wherein the indicia include a textual description of the protocol.

15 25. The method of claim 23, wherein the indicia include an exemplary image obtainable through execution of the protocol.

26. The method of claim 23, wherein the step of selecting includes actuation of a graphical button on an on-screen display.

20 27. The method of claim 23, comprising the further steps of establishing a network link between the diagnostic system and a remote service facility and transferring a description of the protocol from the service facility to the diagnostic system for display in the menu.

25 28. The method of claim 23, comprising the further steps of establishing a network link between the diagnostic system and a remote service facility and transferring data defining the protocol from the service facility to the diagnostic system in response to selection of the protocol from the menu.

29. A method for distributing programs to a plurality of medical diagnostic systems of different modalities, the method comprising the steps of:

storing a first modality program and a second modality program on machine readable media, the first and second modality protocols representing operational parameters of first and second modality diagnostic systems, respectively;

establishing network links between a distribution system and first and second modality diagnostic systems;

transmitting to the first modality diagnostic system data descriptive of the first modality program and displaying indicia descriptive of the first modality program on the first modality diagnostic system; and

transmitting to the second modality diagnostic system data descriptive of the second modality program and displaying indicia descriptive of the second modality program on the second modality diagnostic system.

30. The method of claim 29, wherein the indicia are representative of availability of the protocols.

31. The method of claim 29, wherein at least one of the first and second programs includes an operational protocol.

32. The method of claim 29, wherein the network links are initiated by the first and the second modality diagnostic systems.

33. The method of claim 29, comprising the further step of transmitting data defining the first modality program to the first modality diagnostic system.

34. The method of claim 33, wherein the data defining the first modality program is transmitted in response to a request from the first modality diagnostic system.

35. The method of claim 33, comprising the further step of verifying a subscriber status for the first modality diagnostic system prior to transmitting the data defining the first modality program.

5 36. The method of claim 29, wherein the first modality is a magnetic resonance imaging modality.

37. The method of claim 29, wherein the first modality is a computed tomography imaging modality.

10 38. The method of claim 29, wherein the first modality is an x-ray imaging modality.

15 39. The method of claim 29, wherein the machine readable media include first media for storing the first modality program and second media for storing the second modality program.

40. The method of claim 39, wherein at least of the first and second media comprise a portable machine readable data storage device.

20 41. A method for obtaining an operational protocol in a medical diagnostic system, the method comprising the steps of:

viewing a protocol list on a user interface at the medical diagnostic system;
selecting a desired protocol from the list;
25 establishing a network link with a remote protocol library;
accessing data from the protocol library defining the desired protocol; and
transmitting the data from the library to the diagnostic system.

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42. The method of claim 41, wherein the library includes protocols for a plurality of diagnostic system modalities, and wherein the protocol list includes only protocols for a modality of the medical diagnostic system.

5 43. The method of claim 41, comprising the further step of transmitting data descriptive of the protocol to the medical diagnostic system for addition to the protocol list.

10 44. The method of claim 41, comprising the further step of authorizing a fee for the protocol.

45. The method of claim 44, comprising the further step of updating a fee file in response to authorization of the fee.

15 46. A system for providing operational protocols to a plurality of medical diagnostic scanners, the system comprising:

at least one storage device for storing data defining a first modality protocol and a second modality protocol;

20 a messaging module for formulating messages containing data descriptive of the first and the second modality protocols; and

communications circuitry for establishing network links to first and second modality diagnostic systems and for transmitting data descriptive of the first modality protocol to the first modality diagnostic system and data descriptive of the second modality protocol to the second modality diagnostic system.

25 47. The system of claim 46, the network links to the first and second modality diagnostic systems are initiated by the communications circuitry.

30 48. The system of claim 46, wherein the first modality is a magnetic resonance imaging modality.

49. The system of claim 46, wherein the first modality is a computed tomography imaging modality.

5 50. The system of claim 46, wherein the first modality is an x-ray imaging modality.

51. A method for providing an operational protocol for a medical diagnostic system, the method comprising the steps of:

10 storing the protocol on a machine readable medium;
transmitting a description of the protocol to a medical diagnostic system; and
displaying the description of the protocol at the medical diagnostic system.

15 52. The method of claim 51, comprising the further step of transmitting data defining at least one operational parameter from the machine readable medium to a system controller for execution of the protocol.

53. The method of claim 51, wherein the description includes a textual description of the protocol.

20 54. The method of claim 51, wherein the description includes an exemplary image obtainable through execution of the protocol.

25 55. The method of claim 51, further including the step of selecting the protocol from a protocol menu displayed at the diagnostic system.

56. The method of claim 55, wherein the selecting step includes actuation of a graphical button on an on-screen display.

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57. The method of claim 51, comprising the further steps of establishing a network link between the diagnostic system and a remote service facility and transferring the description of the protocol from the service facility to the diagnostic system for display.

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58. The method of claim 51, comprising the further steps of establishing a network link between the diagnostic system and a remote service facility and transferring data defining the protocol from the service facility to the diagnostic system in response to selection of the protocol at the diagnostic system.

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Figure 1. The 12 test items of the TAP. The items are arranged in a 3x4 grid. Each item consists of a diagram of a mechanical system (a spring-mass-damper system) and a corresponding differential equation. The items are labeled 1 through 12. The diagrams show a mass m connected to a wall by a spring with constant k and a damper with coefficient c . The displacement from equilibrium is x . The equations are: 1. $m\ddot{x} + c\dot{x} + kx = 0$; 2. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t)$; 3. $m\ddot{x} + c\dot{x} + kx = F\sin(\omega t)$; 4. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t)$; 5. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t)$; 6. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t)$; 7. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t)$; 8. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t)$; 9. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t)$; 10. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t)$; 11. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t)$; 12. $m\ddot{x} + c\dot{x} + kx = F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t) + F\cos(\omega t) + F\sin(\omega t)$.